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MINERAL PRODUCTION IN ILLINOIS IN 1961

W. L. Busch

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ABSTRACT

The value of minerals produced in Illinois in 1961 totaled 604 million dollars. The minerals include coal, oil and associated products, stone, sand, gravel, fluorspar, lead, zinc, and such related items as clay products, cement, and lime. The amount and value of minerals produced in Illinois during 1961 and 1960, and for other years, are summarized in the tables, maps, and charts of this report.

INTRODUCTION

The information presented on the following pages of this report indicates the important position held by Illinois among other states in the production of mineral commodities.

The mineral resources of Illinois are the basis for a wide range of economic activity. Coal and oil, the two leading minerals in value, supply fuel and power for manufacturing and transportation. An abundance of sand, gravel, stone, and cement-making materials contributes to the needs of the construction industry. Minerals for special purposes, such as refractory clays and clays for pottery making, silica sand for glass, and other specialized industries, are produced in important quantities. Not only is Illinois an important producer of minerals, but it also ranks high as a center for the processing of mineral raw materials into primary raw materials for the use of industry.

SUMMARY OF 1961 MINERAL PRODUCTION

Illinois in 1961 produced 604 million dollars worth of mineral products — the sixth consecutive year that Illinois mineral production has exceeded the 600 million dollar mark. The 1961 value was only two percent less than the all-time high of 615.8 million dollars established in 1960 (table 1).

The value of fuels produced in Illinois during 1961 was about 68.3 percent of the total value of all minerals (fig. 1). The volume of production of these fuels — coal and crude oil and associated products — remained very close to the substantial levels of 1960.

Illinois stone products, which include crushed stone, cement, and lime, make up the second largest group of minerals produced in this state. As a group, these commodities contributed 14.5 percent of the 1961 total value. The tonnage and total value of crushed stone reported produced during 1961 showed a marked decrease from the amounts reported for 1960. Cement production for 1961 also showed a decline; however, lime production in Illinois registered an increase of about ten percent for 1961.

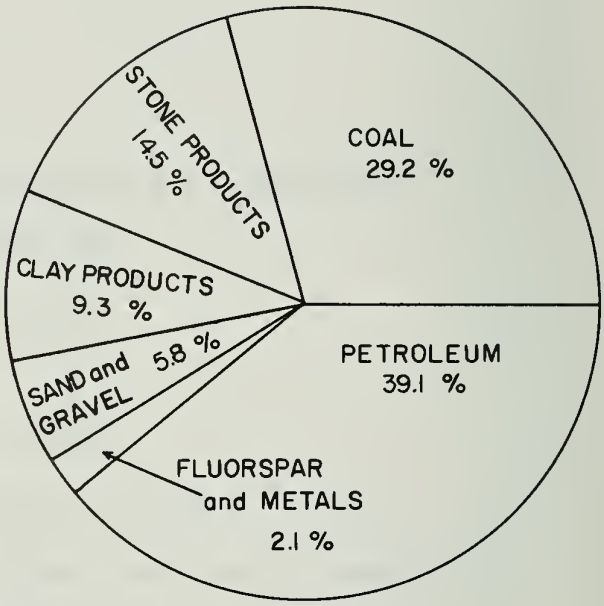


Fig. 1 - Value of Illinois mineral production in 1961 was 604 million dollars. Percentage contributions by the various segments of the Illinois mineral industry are shown above.

The production of clay products in Illinois during 1961 maintained a high level of activity throughout the year. The 56.4 million dollars contributed by this industry was 9.3 percent of the state's over-all mineral products value. The end of table 2 gives the percentage of total mineral value contributed by the clay and other mineral industries from 1941 through 1960. Clay products of Illinois include face brick and common brick, structural tile, drain and sewer tile, refractories, pottery and whiteware.

In 1961 total sand and gravel production increased slightly over 1960 levels and furnished about 5.8 percent of the Illinois total mineral products value. This group of minerals includes common sand and gravel, silica sand, and natural bonded molding sand.

As a group, fluorspar, zinc, and lead, the other minerals produced in Illinois, showed a decline in production for the year, although the production of lead increased over 1960. These three minerals had a value of 12.8 million dollars in 1961, about 2.1 percent of the state's total mineral value. Table 2 indicates the average price per ton for these and other minerals produced in Illinois from 1941 through 1960.

SUMMARY OF ILLINOIS MINERAL PRODUCTION BY COMMODITIES, 1941-1960

Table 2 shows the amounts and values of minerals produced in Illinois for a 20-year period, 1941-1960. During this period the total annual value of Illinois

minerals reported produced has grown from about 335 million dollars in 1941 to more than 600 million dollars in each of the five years, 1956-1960. A wide variety of mineral commodities is included in the Illinois mineral industry and the production records of these various minerals are tabulated in table 2. Total quantity figures and total value figures are useful for following the production performance of individual mineral commodities. Figures at the end of table 2 give the percentage of state total value contributed by the various segments of the Illinois mineral industry and show changes in their relative importance. In order to show these percentage values graphically, figure 2 illustrates the comparative amount of value contributed by each commodity group of the Illinois mineral industry to the state total value, 1941-1960.

COAL

In 1961 Illinois was the fourth-ranking coal-producing state in the nation, exceeded only by West Virginia, Kentucky, and Pennsylvania (fig. 3). During 1961 Illinois produced over 45 million tons of coal, more than 11 percent of all coal produced in the United States (table 3).

The value of coal produced in Illinois during 1961 amounted to 176.4 million dollars. Although 1961 production was only slightly less than in 1960, the total 1961 value was somewhat under that of 1960 owing to a drop of about 2.5 percent in the average value per ton of coal. Nevertheless, coal contributed over 29 percent to the state's total value of all mineral production in 1961.

In 1961 about 27 million tons, or three-fifths of the coal produced in Illinois, was used for producing electrical energy. Increases, in coal consumption by electric-power utilities and coke and gas plants during the year, offset reported decreases occurring in the demand by general manufacturing and processing industries, domestic consumers, and railroads.

Production

The 1961 record for Illinois coal production is shown in tables 4 and 5. Table 4 summarizes the 1961 production in terms of tons of coal produced, type of mine (strip or underground), number of mines, and the approximate value of the product for each producing county. Of the 37 counties producing coal, 14 produced more than one million tons each for a combined total of 91 percent of the state's 1961 output. Coal recovery by stripping methods was important in more than half of the producing counties in 1961 and accounted for more than 50 percent of the total tonnage.

The production of coal by counties since 1882, when mining records were begun, is shown in table 5. During this 80 year period, over 3.6 billion tons of coal has been recovered from Illinois mines. Of the 70 counties that have recorded coal production since 1882, 11 have produced more than 100 million tons of coal each, and as a group have accounted for more than three-fourths of the state's entire output. Table 5 also shows the total number of years that each county has produced coal since 1882 and the last year it produced coal.

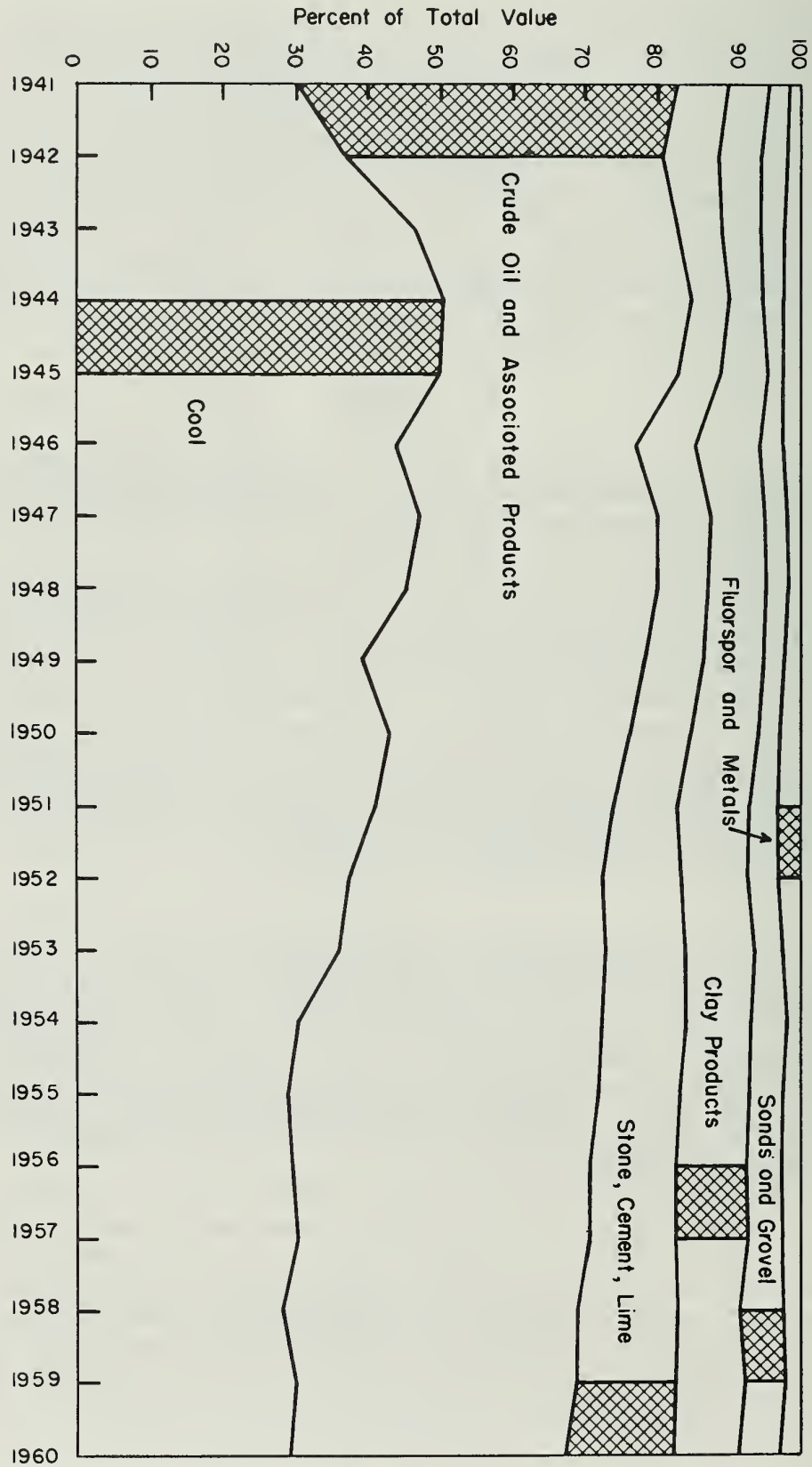


Fig. 2 - Percentage of total value contributed by various segments of the Illinois mineral industry, 1941-1960. Shaded areas show approximate period when percentage of state total value was greatest for each mineral group, 1941-1960.

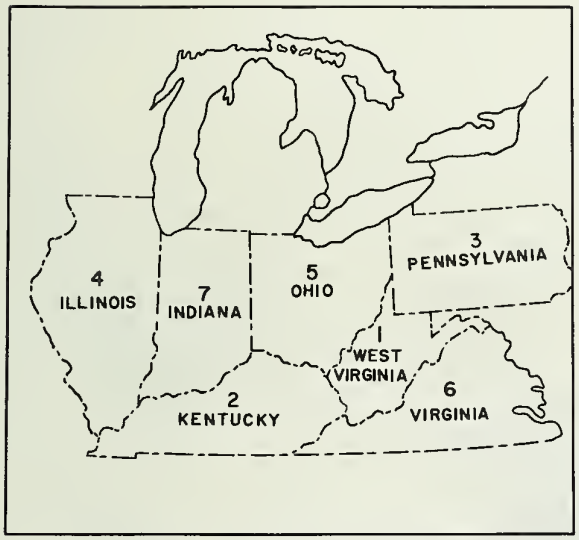


Fig. 3 - States that produced about 90 percent of the nation's bituminous coal in 1961.

The 37 counties that produced coal in Illinois during 1961 are indicated in figure 4, with the intensity of mining activity illustrated by the degree of shading. The Illinois industrial area, possessing large metropolitan and manufacturing centers, has available virtually unlimited supplies of coal. The calculated reserves of bituminous coal in Illinois, amounting to over 136 billion tons, exceed those of any other state. Although Illinois coal is shipped to other states, especially those states of the Upper Mississippi Valley, it is reported that about 72 percent of the coal consumed in Illinois during 1961 was mined in Illinois. Owing to the wide range of coal mining activity in Illinois (fig. 4), all parts of the state have ample supplies of coal nearby or readily available by rail or water shipment from Illinois coal fields.

PETROLEUM

In 1961 the United States produced a total of 2.6 billion barrels of crude oil, a slight increase over the levels of production established in 1959 and 1960 (table 6). The ten leading oil-producing states accounted for more than 91 percent of the total production in 1961. Texas held the dominant position with about 36 percent of the nation's output. Louisiana, California, and Oklahoma, the three next highest ranking producers, contributed a combined total of about 35 percent of the nation's production. The other six main oil-producing states — Wyoming, Kansas, New Mexico, Illinois, Mississippi, and Colorado — are comparatively small producers.

The oil and gas reserves of each state are estimated by the industry every year. Only the reserves that have been proved and can be recovered under existing economic and operating conditions (table 7) are included in the estimates. The figures do not imply that all the oil or gas in a state or in the nation has been discovered, but they do represent a known amount of recoverable oil or gas (table 8) on a given date. The nation's oil and gas reserves, estimated at the beginning of 1962, had increased slightly over the reserves estimated at the start of 1961. Although the respective increases were not large, the reserve figures should be noted each year in the light of this nation's continued and growing demand for liquid and gas fuels.

Illinois Oil Production

Illinois oil production for 1961 was estimated at 77,478,000 barrels, a slight increase over the 77,341,000 barrels produced in 1960. Peak production

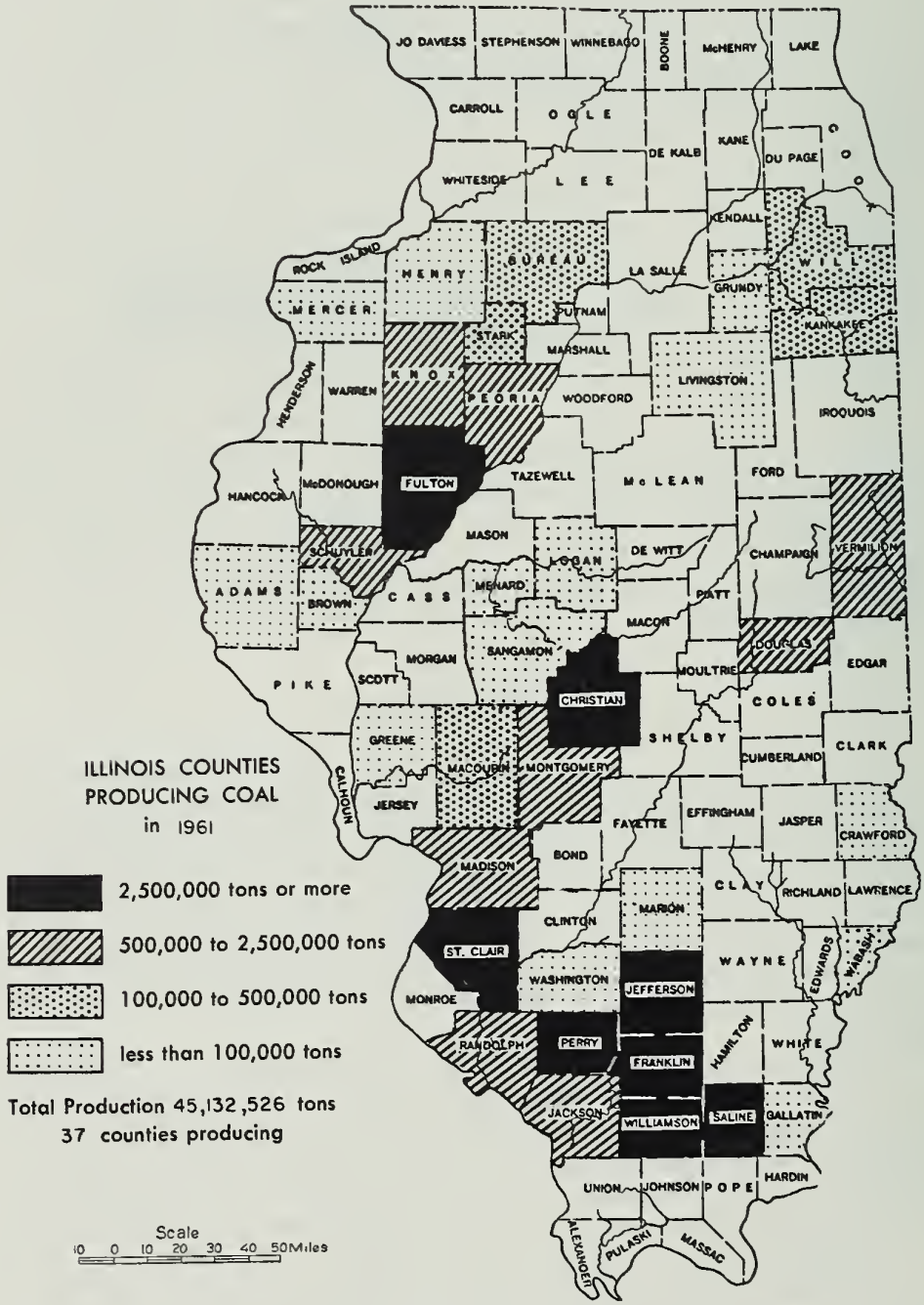


Fig. 4 - Illinois coal production by counties in 1961.

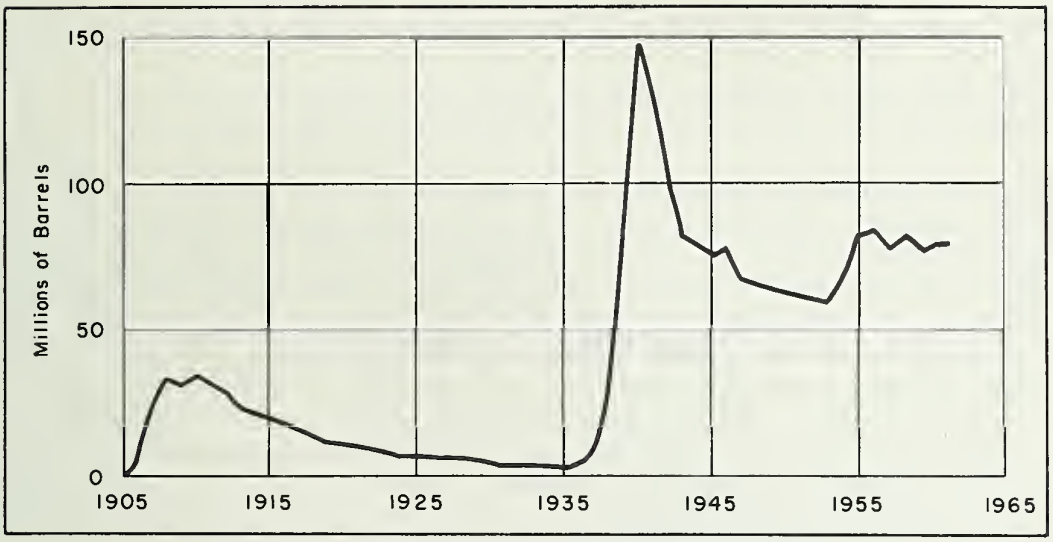


Fig. 5 - Illinois production of crude oil, 1905-1961.

for Illinois was attained in 1940 when 147,647,000 barrels was produced (fig. 5), after which production gradually declined to a low of just over 59 million barrels in 1953. In 1954, through a combination of increased drilling and oil-well treatment techniques, such as fracturing and waterflooding, the downward trend was reversed and production increased to the 1956 postwar high of 82.3 million barrels. Although drilling has declined in recent years (table 9), production has remained fairly level because secondary methods of oil recovery in Illinois, chiefly waterflooding, have been contributing increasing amounts to the total oil produced. In 1961 about two-thirds of Illinois oil was produced by such processes. The average value for Illinois oil in 1961 was estimated at $3.00 per barrel for a total of about 232.4 million dollars. Since 1954 the value of crude oil has been the largest single segment of the state's total annual mineral value. For 1961, Illinois crude oil, together with its associated products of gas and liquefied petroleum gases, accounted for about 39 percent of the state total.

Table 10 gives, by county, the estimated amount and value of oil produced in 1961 and each county's percentage of the state total. Also shown in this table are figures giving the total estimated oil production for each county for the period 1888 through 1961. The map in figure 6 shows the 41 counties in Illinois that produced oil in 1961 and indicates the major oil-producing counties. The map (fig. 7), which outlines most of southern Illinois and indicates the extent of the Illinois basin, shows the relative sizes of the various oil fields together with the new fields discovered in 1961.

STONE, SAND, AND GRAVEL

Stone

During 1961 Illinois quarry operators produced 33.5 million tons of crushed and broken stone which was valued at 45.8 million dollars. The tonnage reported for 1961 is about 9 percent less than the 37 million tons reported for 1960. In

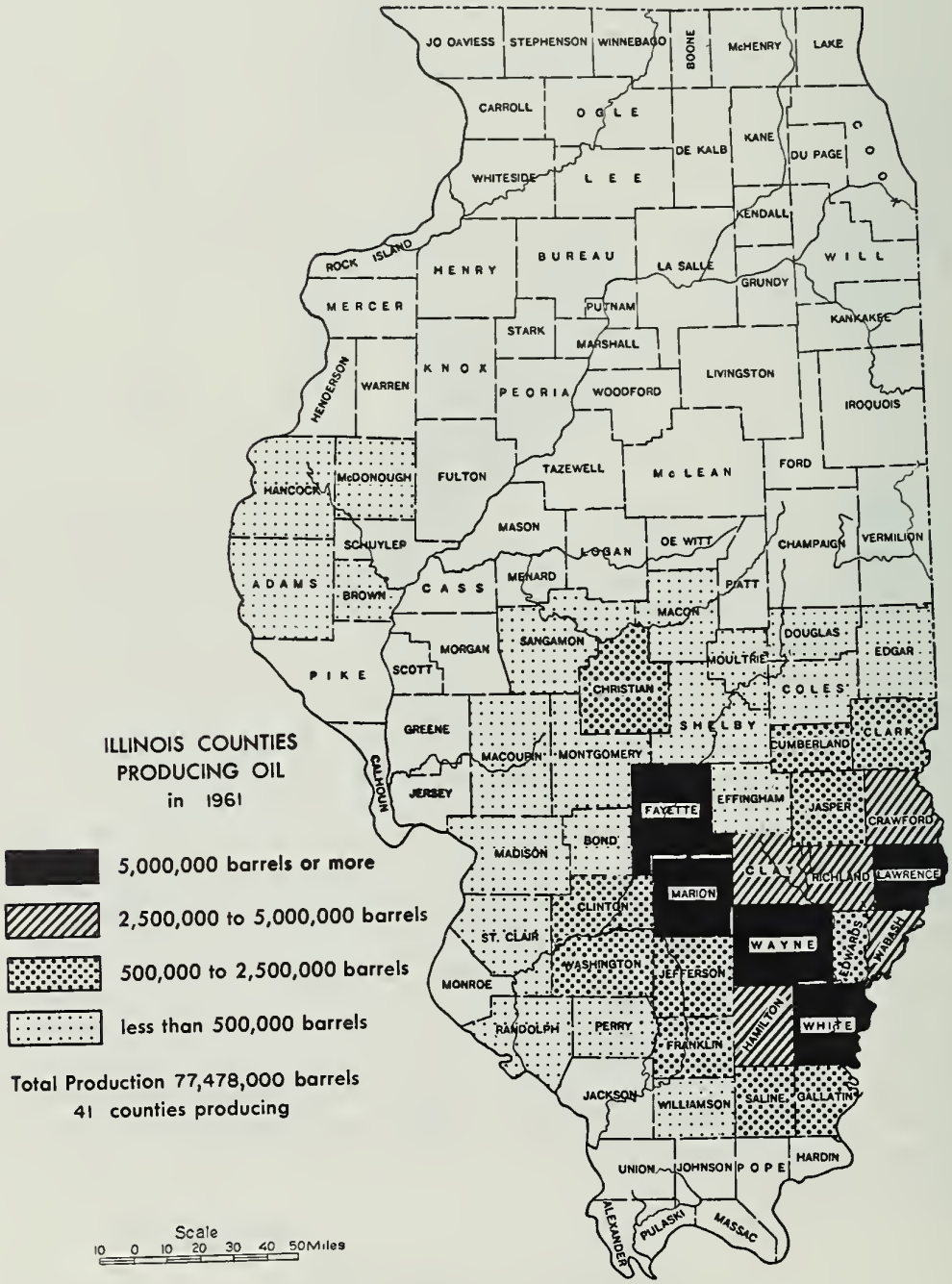


Fig. 6 - Illinois oil production by counties in 1961.

1961 crushed stone used for building and road purposes recorded a marked decline as compared to the amount of stone used for these purposes in 1960. The average value of stone produced in 1961 was $1.37 per ton, compared to the 1960 average value of $1.38 per ton. The total value of stone reported for 1960 was almost 51 million dollars.

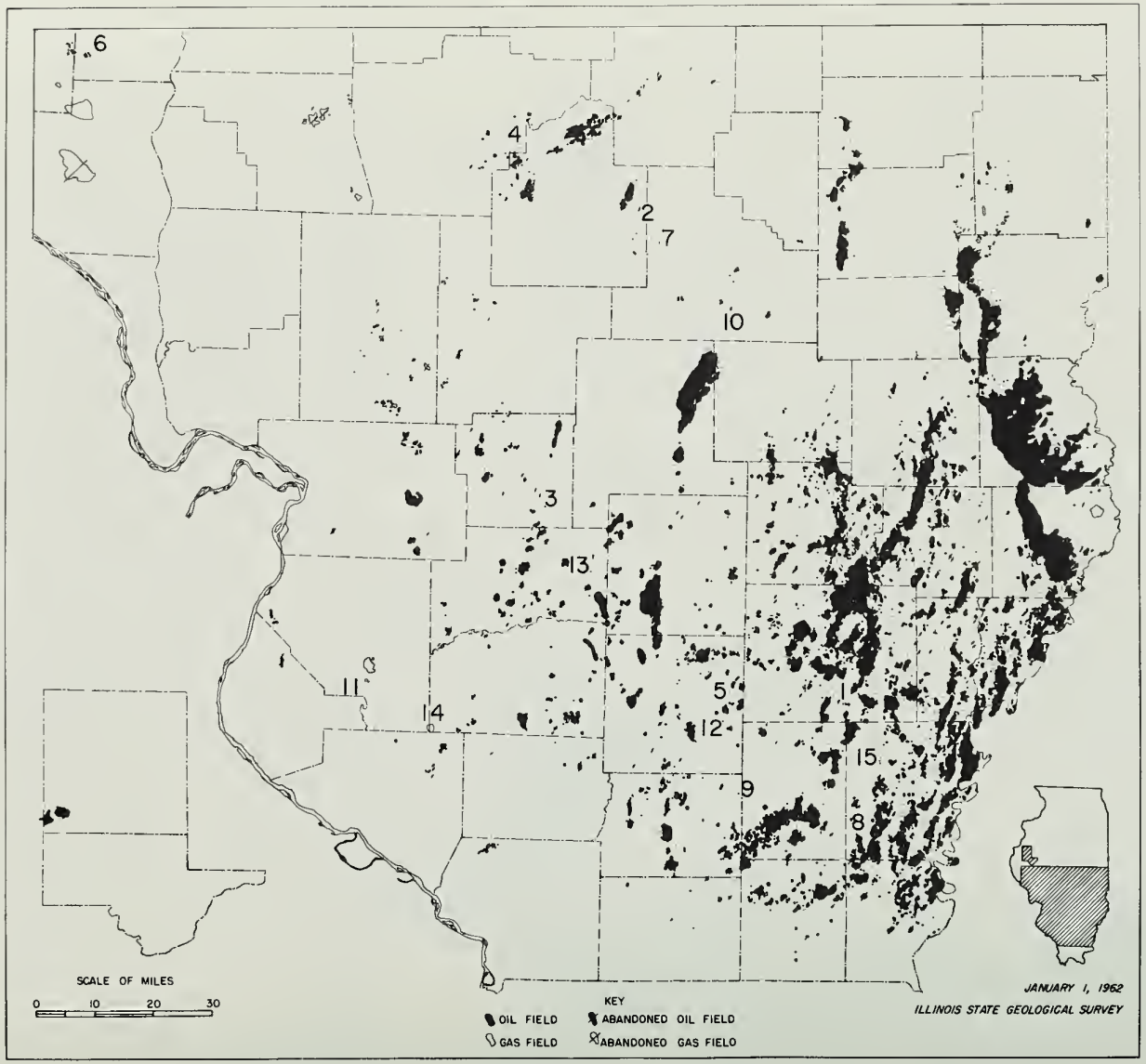
The ten Illinois counties leading in the production of crushed stone for various purposes in 1961 are Cook, Will, St. Clair, Kankakee, DuPage, Livingston, Randolph, Carroll, Johnson, and Rock Island. As a group these 10 counties produced over 22 million tons of stone in 1961, valued at more than 29.4 million dollars. In 1961 these counties, which make up one-sixth of the 60 counties reporting stone production, quarried about 66 percent of the total tonnage produced. Cook County, the leading stone-producing county in the state, produced more than 10.8 million tons, valued at 14.2 million dollars. The next highest group of ten counties which produced important quantities of stone in 1961 are Winnebago, Madison, Vermilion, Calhoun, Union, Peoria, Adams, Ogle, Monroe, and Coles. Together these counties produced a total of more than 5 million tons of crushed stone valued at over 7.4 million dollars. Production figures indicate that the 20 counties listed in the two groups above produced over 27.2 million tons of stone, or 81 percent of the 1961 state total, while the remaining 40 counties reporting stone production accounted for the other 19 percent.

Crushed limestone and dolomite production is summarized, under five important uses, in table 11, which shows final figures for 1960 and 1961. A detailed accounting is given table 12 of stone production in Illinois according to region (fig. 8) and according to three major categories of use—stone for road and building, agriculture, and all other uses. Table 12 also lists every county reported to have had stone production, as well as the average value at the quarry for all categories of stone in all regions.

Agricultural limestone (agstone) is an important source of calcium for farm soils and, therefore, is an important quarry product. Tables 11 and 12 give 1961 figures on the production of agstone, which shows a marked increase over the amount produced in 1960. According to a nation-wide survey conducted by the National Limestone Institute, in 1961 Illinois led all states in the use of agstone spread on farm lands with a total of 3.2 million tons.

Sand and Gravel

Common sand and gravel are found in many places in Illinois. They are used extensively in the construction industry, in building and maintaining highway and railway roadbeds, and for many other uses. Sand production figures for 1960 and 1961 are summarized in table 13 and show that sand for road and other purposes increased sufficiently in 1961 to more than offset declines in building uses. Table 14 gives a detailed review of common sand production in Illinois according to region (fig. 8) and according to three major categories of use — sand for road paving purposes, for building, and for all other uses. Table 14 shows that the Northeast Region of Illinois is a heavy producer of common sand, especially for paving and building purposes. The Northwest and Central Regions are the next most important producers of common sand, and with the exception of the West Southwest and the Southwest Regions, the other four parts of the state are small producers of this commodity.



1. Aden East
2. Assumption Central
3. Beaver Creek Northeast (Gas)
4. Berry
5. Bluford
6. Buckhorn
7. Dollville
8. Enfield South
9. Macedonia
10. Mode
11. New Athens (Gas)
12. Opdyke
13. Shattuc North
14. Tilden North (Gas)
15. Trumbull North

Fig. 7 - Oil and gas pools discovered in Illinois in 1961.

Illinois common gravel production figures for 1960 and 1961 are given in table 15 and show that the 1961 figure increased over one million tons as compared to the 1960 production total. Table 16 shows that the Northeast Region is a substantial producer of gravel and that the Central and Northwest Regions are also important producers of this material. Table 16 also indicates that the intensity of gravel production throughout Illinois does not necessarily follow the production pattern established by sand in the various regions of the state. Illinois is fortunate in possessing abundant deposits of sand and gravel reasonably accessible to the principal market areas.

Special Sands

Special sands in Illinois include two sands that have special and important uses in industry. One of these is natural bonded molding sand that is produced in small quantities each year. In 1961 about 41,800 tons was produced, valued at $65,600 (table 17). Natural bonded molding sand can be used in molds for the casting of metals without the addition of a binding substance, such as clay, because the sand already contains the proportion of fine clay to permit molding use.

The other special sand of Illinois is silica sand. This mineral, which is produced in substantial quantities in LaSalle County and in lesser amounts in Ogle County, is a nearly pure quartz (a natural form of silica) sand. During 1961 about 2.6 million tons of silica sand was produced for various uses and was valued at more than 10.4 million dollars (table 17). According to 1961 production figures, the largest individual use for Illinois silica sand was in the manufacture of glass. The usual types of glass are made by melting a mixture of chemicals containing about two-thirds silica sand. The second most important use for the state's silica sand was for molding sand purposes. Silica sand, when tempered by the addition of clay or other binding material, makes an excellent molding sand because it can withstand the great heat of metal casting.

CLAY PRODUCTS

The manufacture of Illinois clay products reported for 1961 amounted to more than 56.4 million dollars. Although this amount was slightly below the 56.6 million dollar value reported in 1960, it represents a very productive year for the industry. Clay products include such items as face brick and common brick, sewer pipe and drain tile, flue pipe, building tile, vitreous plumbing fixtures, glazed tile, electrical porcelains, and pottery and whiteware. Also included in the list of Illinois clay products are the various forms of special heat-resistant fire brick and silica brick used by the metallurgical industries. Table 18 summarizes the production of clay products for the years 1960 and 1961. Fifty-eight clay product plants located in thirty different counties throughout Illinois reported production for 1961.

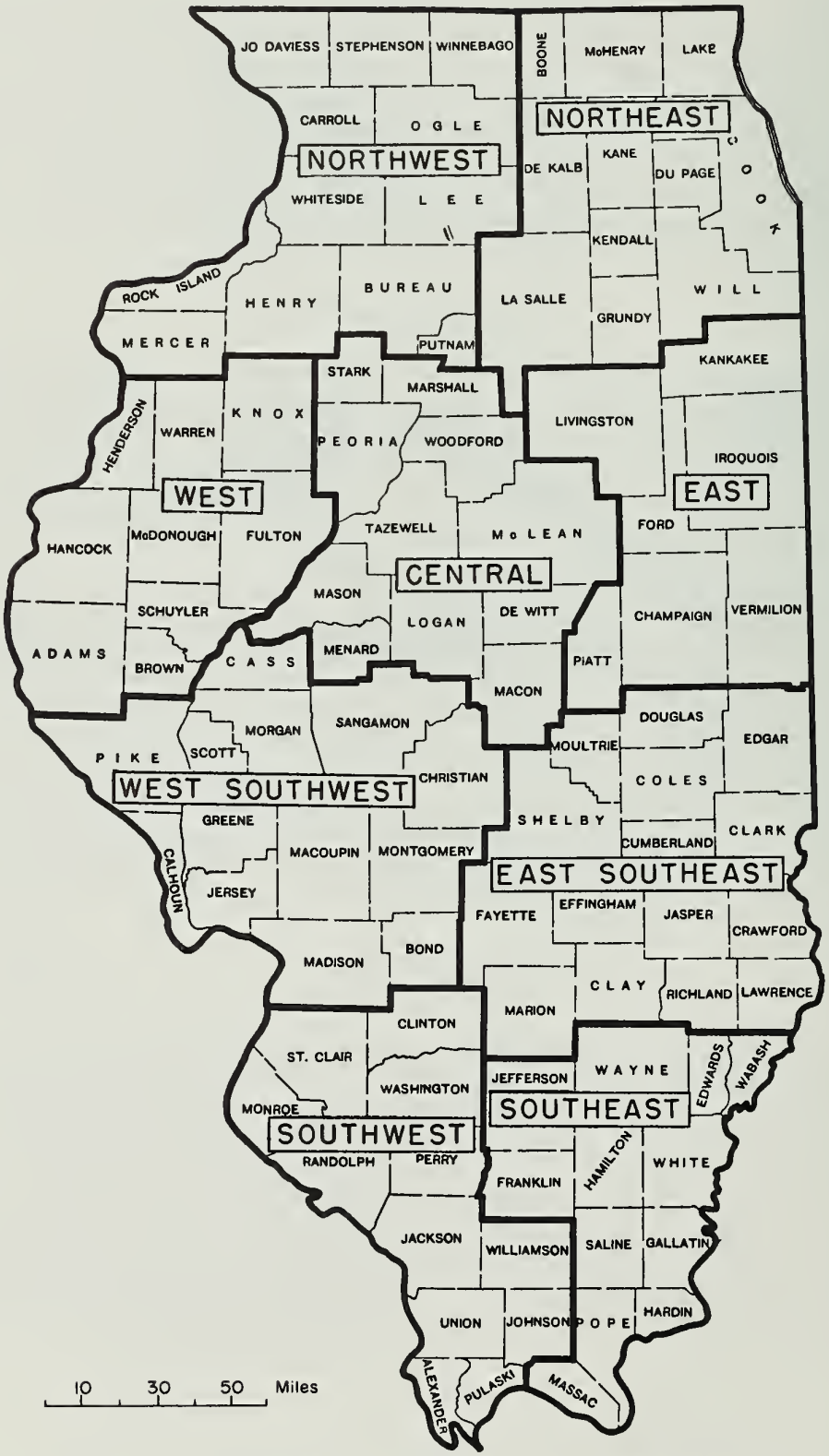


Fig. 8 - County outline map of Illinois showing area division.

CEMENT

The manufacture of cement is the fifth largest mineral industry in value of product in Illinois. Two counties possess the state's present four cement manufacturing plants; two are located at Oglesby and one at LaSalle in LaSalle County, and one at Dixon in Lee County. Figures in table 1 show that Illinois shipped a total of more than 9.0 million barrels of all types of cement in 1961, valued at more than 29.7 million dollars.

Because transportation is an important element in the delivered cost of cement, the continued successful operation of a plant depends upon a large market potential in its vicinity and upon available low-cost transportation facilities. The Illinois cement industry, located in the north-central part of the state, is near a substantial market area and has available to it both rail and water transportation systems.

FLUORSPAR

Final figures for 1961 indicate that Illinois produced and shipped 116,908 tons of finished fluorspar, which was 57 percent of the 205,083 tons of finished fluorspar produced and shipped in the United States. During 1961, fluorspar imported for consumption in the United States amounted to 505,759 tons, and the total consumed amounted to 681,883 tons. Illinois supplied about 17 percent of all fluorspar (domestic and foreign) consumed in the United States.

Fluorspar is an important raw material for the iron and steel, aluminum, chemical, glass, and ceramics industries. Commercial fluorspar is graded principally according to its content of calcium fluoride and is prepared ordinarily as metallurgical grade, acid grade, and ceramic grade.

Table 19, which indicates the amount of fluorspar shipped from mines in the United States in 1961, shows that Illinois was the foremost producer of this mineral in the country. Table 20, which lists the more important fluorspar consuming areas of the country, shows that Illinois is also a large consumer of fluorspar.

METALS

Production figures for 1961 indicate that mine output of zinc in Illinois amounted to 26,795 tons and was valued at more than 6.1 million dollars. Illinois lead production totaled 3,430 tons, with a value of $706,580 for 1961 (table 1). No silver was reported for 1961, the fifth consecutive year that this metal has not been produced from Illinois mining operations (table 2). Zinc and lead are produced in Illinois from primary metal mines in Jo Daviess County located in the northwestern part of the state, and as by-products of fluorspar mining in Hardin and Pope Counties in southern Illinois.

TABLE 1 - SUMMARY OF ILLINOIS MINERAL PRODUCTION, 1960-1961[a]

Material	Unit	1960[b] Quantity	1960[b] Value at plants Total	1960[b] Value at plants Av.	1961[b] Quantity	1961[b] Value at plants Total	1961[b] Value at plants Av.
Coal - bituminous	tons	45,820,632	$183,740,734	$ 4.01	45,132,526	$176,468,177	$ 3.91
Crude oil	bbls.	77,341,000	230,338,000	2.98	77,478,000	232,434,000	3.00
Limestone and dolomite	tons	37,032,017	50,978,358	1.38	33,576,884	45,835,938	1.37
Cement	bbls.	9,139,300	30,732,000	3.36	9,055,552	29,720,368	3.28
Clay products	-	-	56,621,065	-	-	56,400,489	-
Sand	tons	11,988,786	10,633,054	0.89	12,178,037	10,776,163	0.88
Gravel	tons	14,615,153	13,694,589	0.94	15,649,754	13,977,679	0.89
Special sands	-	-	9,818,110	-	-	10,511,283	-
Fluorspar	tons	134,529	6,935,511	51.55	116,908	5,956,350	50.95
Zinc	tons	29,550	7,623,900	258.00	26,795	6,162,850	230.00
Lead	tons	3,000	702,000	234.00	3,430	706,580	206.00
Other minerals[c]	-	-	13,982,679	-	-	15,050,123	-
Total value			$615,800,000			$604,000,000	

a Table based on figures from the U. S. Bureau of Mines, the Illinois State Department of Mines and Minerals, and the Illinois State Geological Survey.

b Subject to revision.

c Includes natural gas, natural gasoline, liquefied petroleum gases, and lime.

TABLE 2 - SUMMARY OF ILLINOIS MINERAL PRODUCTION BY COMMODITIES, 1941-1960[a,b]

Year	State total value annual mineral production	Coal			Crude oil		
		Tons	Value	Average per ton	Barrels	Value	Average per bbl.
1941	$335,504,083	55,365,835	$100,212,000	$1.81	134,138,000	$174,379,400	$1.30
1942	341,997,844	65,746,204	125,575,000	1.91	106,590,000	144,962,400	1.36
1943	337,911,551	73,344,761	156,224,000	2.13	82,256,000	112,700,000	1.37
1944	342,832,317	77,400,031	172,602,000	2.23	77,413,000	107,370,000	1.39
1945	344,431,070	73,446,930	171,866,000	2.34	75,210,000	105,294,000	1.40
1946	379,673,186	63,767,082	166,432,000	2.61	75,297,000	119,722,000	1.59
1947	458,736,783	68,325,241	215,224,000	3.15	66,459,000	139,564,000	2.10
1948	567,623,654	66,166,805	256,728,000	3.88	64,808,000	179,518,000	2.77
1949	487,807,686	47,630,380	192,426,000	4.04	64,501,000	178,668,000	2.77
1950	539,236,400	57,282,303	231,993,000	4.05	62,028,000	171,818,000	2.77
1951	542,031,000	54,869,679	223,320,000	4.07	60,244,000	166,876,000	2.77
1952	500,819,600	45,752,588	187,585,600	4.10	60,071,000	166,397,000	2.77
1953	501,926,200	45,966,114	181,566,200	3.95	59,025,000	171,586,000	2.91
1954	519,242,267	41,775,752	159,583,373	3.82	66,940,000	200,820,000	3.00
1955	570,653,395	45,711,555	167,304,290	3.66	81,131,000	237,713,830	2.93
1956	613,364,460	47,804,040	183,567,514	3.84	82,314,000	242,826,300	2.95
1957	612,755,172	46,682,889	186,731,556	4.00	76,649,000	239,911,400	3.13
1958	611,625,000	43,777,130	175,984,063	4.02	80,779,000	242,337,000	3.00
1959	606,300,000	45,374,626	184,220,982	4.06	76,727,000	230,181,000	3.00
1960	615,800,000	45,820,632	183,740,734	4.01	77,341,000	230,338,000	2.98

a Table based on figures from the Illinois State Geological Survey annual mineral production reports.
b Subject to revision.

TABLE 2 - SUMMARY OF ILLINOIS MINERAL PRODUCTION BY COMMODITIES, 1941-1960 — continued[a,b]

Year	Crushed stone			Cement			Lime		
	Tons	Value	Average per ton	Barrels	Value	Average per bbl.	Tons	Value	Average per ton
1941	12,206,136	$11,104,104	$0.91	6,033,440	$ 8,799,667	$1.46	246,278	$1,723,850	$ 6.99
1942	14,006,556	13,014,429	0.93	7,087,400	10,284,111	1.45	314,077	2,266,152	7.21
1943	11,429,102	10,654,148	0.93	4,504,442	6,965,607	1.55	314,735	2,386,540	7.58
1944	10,668,128	10,689,477	1.00	3,597,074	5,592,703	1.55	290,988	2,266,539	7.78
1945	11,122,679	11,340,341	1.02	4,509,932	7,654,876	1.70	287,607	2,228,909	7.75
1946	16,199,882	17,512,579	1.08	7,069,779	12,421,968	1.76	280,051	2,365,455	8.45
1947	15,786,379	18,424,089	1.17	7,515,955	14,164,976	1.88	299,187	2,736,262	9.15
1948	18,593,042	23,379,762	1.26	7,875,758	16,078,433	2.04	283,090	3,000,225	10.60
1949	17,300,130	21,328,699	1.23	8,200,148	17,340,782	2.11	276,161	3,197,890	11.58
1950	18,283,655	22,099,967	1.21	8,145,885	17,810,417	2.19	367,485	4,465,413	12.15
1951	19,005,400	23,082,600	1.20	8,648,647	20,775,900	2.40	462,690	5,878,300	12.70
1952	22,606,000	28,835,300	1.27	9,042,260	21,663,400	2.40	460,775	5,917,000	12.84
1953	22,000,000	27,300,000	1.24	9,100,000	23,114,000	2.54	520,000	6,987,000	13.44
1954	23,089,000	29,400,700	1.27	9,419,600	24,246,500	2.57	532,050	7,420,850	13.95
1955	24,400,630	29,829,205	1.22	9,397,098	25,031,520	2.66	644,180	9,416,135	14.62
1956	28,005,490	38,092,089	1.36	9,301,189	27,263,794	2.93	Lime	Value	in Other[c]
1957	28,140,100	38,750,105	1.38	8,575,129	26,356,365	3.07	"	"	" "
1958	33,064,789	43,876,091	1.33	9,618,339	30,858,270	3.21	"	"	" "
1959	31,909,142	41,746,465	1.31	9,924,486	31,793,942	3.20	"	"	" "
1960	37,032,017	50,978,358	1.38	9,139,300	30,732,000	3.36	"	"	" "

a Table based on figures from the Illinois State Geological Survey annual mineral production reports.
b Subject to revision.
c Figures on lime production restricted after 1955. Lime value 1956-1960 recorded in "Other commodities" value column.

TABLE 2 - SUMMARY OF ILLINOIS MINERAL PRODUCTION BY COMMODITIES, 1941-1960 — continued[a,b]

Year	Clay products	Common sand			Gravel			Special sands[c]
	Value	Tons	Value	Average per ton	Tons	Value	Average per ton	Value
1941	$19,593,325	5,038,032	$ 2,249,091	$0.45	8,336,247	$ 3,832,278	$0.46	$ 3,923,270
1942	19,624,015	5,469,306	2,627,665	0.48	9,350,636	4,831,864	0.52	5,391,124
1943	17,254,351	3,552,391	1,763,612	0.50	6,789,760	3,348,897	0.49	6,394,566
1944	15,076,524	2,956,570	1,450,369	0.49	6,057,765	2,968,300	0.49	5,930,270
1945	18,577,913	3,306,383	1,708,718	0.49	6,093,060	2,975,805	0.49	4,854,100
1946	32,197,366	4,830,604	2,851,548	0.59	10,259,669	5,809,757	0.57	4,742,883
1947	32,740,735	4,535,616	3,110,206	0.69	8,275,141	4,818,399	0.58	6,141,706
1948	43,406,183	5,738,402	4,133,668	0.72	9,353,275	6,059,445	0.65	6,661,154
1949	37,081,260	6,767,406	5,007,363	0.74	8,510,918	5,516,198	0.65	6,034,859
1950	47,155,311	6,467,478	4,777,106	0.74	9,763,933	6,687,958	0.68	7,428,555
1951	53,594,300	6,607,153	4,854,700	0.74	8,521,200	6,398,500	0.75	9,066,000
1952	43,351,400	6,822,660	4,924,600	0.72	8,758,635	6,253,800	0.71	8,675,600
1953	46,160,400	6,882,850	5,108,500	0.74	8,108,750	6,166,200	0.76	8,703,200
1954	47,200,625	8,050,990	5,911,535	0.73	11,991,625	9,350,965	0.78	10,283,200
1955	54,855,665	7,750,860	5,996,735	0.77	10,637,000	8,990,175	0.85	10,782,275
1956	59,101,572	10,461,300	7,852,592	0.75	12,776,606	10,570,480	0.83	12,056,475
1957	60,671,157	9,424,163	7,252,004	0.77	12,817,007	11,018,425	0.86	11,264,529
1958	55,276,000	11,461,532	10,360,460	0.90	16,578,457	15,696,087	0.95	9,420,987
1959	58,343,921	10,977,478	9,895,321	0.90	14,075,667	12,829,862	0.91	10,396,376
1960	56,621,065	11,988,786	10,633,054	0.89	14,615,153	13,694,589	0.94	9,818,110

a Table based on figures from the Illinois State Geological Survey annual mineral production reports.
b Subject to revision.
c Includes silica sand, natural bonded molding sand, and ground siliceous materials.

TABLE 2 - SUMMARY OF ILLINOIS MINERAL PRODUCTION BY COMMODITIES, 1941-1960 — continued[a,b]

Year	Fluorspar			Zinc			Lead		
	Tons	Value	Average per ton	Tons	Value	Average per ton	Tons	Value	Average per ton
1941	133,333	$3,047,247	$22.85	9,198	$1,379,700	$150.00	2,376	$ 270,864	$114.00
1942	161,949	4,306,750	26.59	9,389	1,746,354	186.00	2,344	314,096	134.00
1943	198,789	6,292,789	31.66	5,851	1,263,816	216.00	2,043	306,450	150.00
1944	176,259	5,954,991	33.79	7,262	1,655,736	228.00	1,971	315,360	160.00
1945	147,251	5,014,807	34.06	8,310	1,911,300	230.00	3,005	516,860	172.00
1946	154,525	5,493,642	35.55	8,798	2,146,712	244.00	3,865	842,570	218.00
1947	167,157	6,148,654	36.78	10,073	2,437,666	242.00	2,325	674,250	290.00
1948	172,561	6,322,246	36.64	12,980	3,452,680	266.00	3,695	1,322,810	358.00
1949	120,881	4,621,733	38.23	18,157	4,502,936	248.00	3,824	1,208,384	316.00
1950	154,623	6,110,765	39.52	26,982	7,500,996	278.00	2,729	725,914	266.00
1951	204,328	9,294,700	45.49	21,776	7,926,500	364.00	3,160	1,093,364	346.00
1952	188,300	9,481,200	50.35	18,816	6,246,900	332.00	4,262	1,372,400	322.00
1953	163,300	8,567,000	52.46	14,556	3,173,200	218.00	3,391	902,000	266.00
1954	107,830	5,989,219	55.54	14,427	3,116,230	216.00	3,232	885,570	274.00
1955	166,337	7,838,470	47.12	21,700	5,338,200	246.00	4,544	1,354,112	298.00
1956	178,254	8,469,450	47.51	24,039	6,586,686	274.00	3,832	1,203,248	314.00
1957	169,939	8,827,171	51.94	22,185	5,146,920	232.00	2,970	849,420	286.00
1958	152,087	7,930,613	52.15	24,940	5,087,760	204.00	1,610	376,740	234.00
1959	112,469	5,908,307	52.53	26,815	6,167,450	230.00	2,570	591,100	230.00
1960	134,529	6,935,511	51.55	29,550	7,623,900	258.00	3,000	702,000	234.00

a Table based on figures from the Illinois State Geological Survey annual mineral production reports.
b Subject to revision.

TABLE 2 - SUMMARY OF ILLINOIS MINERAL PRODUCTION BY COMMODITIES, 1941-1960 — continued[a,b]

Year	Silver			Other commodities	Commodity Group Values in Percentage of State Total Mineral Value, 1941-1960[c]					
	Ounces	Value	Average per oz.	Value	Coal	Oil & Prod.	Stone Prod.	Clay Prod.	Sand & Gravel	Fluorspar & metals
1941	20,340	$14,464	$0.711	$ 4,974,823	30.1	52.9	6.5	6.1	3.0	1.4
1942	104	74	0.711	7,053,810	36.7	44.2	7.5	5.9	3.8	1.9
1943	2,153	1,531	0.711	12,355,244	46.6	36.3	6.0	5.4	3.4	2.3
1944	2,437	1,733	0.711	10,958,315	50.4	34.2	5.4	4.7	3.0	2.3
1945	2,198	1,563	0.711	10,485,878	49.9	33.3	6.2	5.7	2.7	2.2
1946	2,302	1,860	0.808	7,132,846	43.9	33.2	8.5	8.7	3.5	2.2
1947	1,790	1,620	0.905	12,550,220	46.9	32.9	7.7	7.4	3.1	2.0
1948	4,047	3,663	0.905	17,557,385	45.2	34.5	7.5	7.9	3.0	1.9
1949	3,128	2,831	0.905	10,870,751	39.4	38.7	8.6	7.8	3.4	2.1
1950	2,001	1,811	0.905	10,661,187	43.0	33.6	8.2	9.0	3.5	2.7
1951	3,465	3,136	0.905	9,867,000	41.2	32.6	9.2	9.9	3.7	3.4
1952	3,781	3,400	0.905	10,112,000	37.4	35.2	11.3	8.7	4.0	3.4
1953	2,338	2,100	0.905	12,590,400	36.2	36.7	11.4	9.2	4.0	2.5
1954	1,160	1,050	0.905	15,032,450	30.7	41.6	11.8	9.1	4.9	1.9
1955	3,075	2,783	0.905	6,200,000	29.3	42.7	11.3	9.6	4.5	2.6
1956	1,580	1,430	0.905	15,772,830	30.0	40.6	12.2	9.6	5.0	2.6
1957	No	production	reported	15,976,120	30.5	40.1	12.3	9.9	4.8	2.4
1958	"	"	"	14,420,929	28.7	40.5	13.7	9.0	5.8	2.3
1959	"	"	"	14,225,274	30.4	38.7	13.7	9.6	5.5	2.1
1960	"	"	"	13,982,679	29.8	38.0	15.0	9.2	5.5	2.5

a Tables based on figures from the Illinois State Geological Survey annual mineral production reports.
b Subject to revision.
c Approximate percentage contributed to state total value by each mineral group per year, 1941-1960.

TABLE 3 - NATIONAL PRODUCTION OF BITUMINOUS COAL, 1958-1961[a]
(thousands of tons)

State	1958	1959	1960	1961	Percent of 1961 total
West Virginia	119,468	119,692	118,944	113,070	28.1
Kentucky	66,312	62,810	66,847	63,032	15.6
Pennsylvania	67,771	65,347	65,425	62,652	15.5
Illinois	43,912	45,466	45,977	45,246	11.2
Ohio	32,028	35,112	33,957	32,226	8.0
Virginia	26,826	29,769	27,838	30,332	7.5
Indiana	15,022	14,804	15,538	15,106	3.8
Alabama	11,182	11,947	13,011	12,915	3.2
Tennessee	6,785	5,913	5,931	5,860	1.5
Utah	5,328	4,545	4,955	5,159	1.3
Total	394,634	395,405	398,423	385,598	95.7
All other states	15,812	16,623	17,089	17,379	4.3
Grand total	410,446	412,028	415,512	402,977	100.0

a Source: U. S. Bureau of Mines.

TABLE 4 - ILLINOIS COAL PRODUCTION BY COUNTIES IN 1961[a]

County	Number of mines	Tons mined		Total tons	Total value[b]
		Underground	Strip		
Adams	1	-	35,866	35,866	$ 140,236
Brown	1	-	1,730	1,730	6,764
Bureau	1	-	306,558	306,558	1,198,642
Christian	1	4,587,309	-	4,587,309	17,936,378
Crawford	1	-	106	106	414
Douglas	1	571,181	-	571,181	2,233,318
Franklin	3	3,778,864	-	3,778,864	14,775,358
Fulton	21	9,917	4,858,231	4,868,148	19,034,459
Gallatin	4	62,442	473	62,915	245,998
Greene	1	-	6,424	6,424	25,118
Henry	1	96,013	-	96,013	375,411
Jackson	6	415,723	676,999	1,092,722	4,272,543
Jefferson	2	2,884,373	15,434	2,899,807	11,338,245
Kankakee	1	-	743,999	743,999[c]	2,909,036
Knox	3	-	2,061,109	2,061,109	8,058,936
Livingston	1	-	205	205	802
Logan	1	25,896	-	25,896	101,253
Macoupin	1	312,192	-	312,192	1,220,671
Madison	2	623,235	-	623,235	2,436,849
Marion	1	24,108	-	24,108	94,262
Menard	1	10,593	-	10,593	41,419
Mercer	2	17,946	3,026	20,972	82,001
Montgomery	1	2,055,334	-	2,055,334	8,036,356
Peoria	10	21,113	990,965	1,012,078	3,957,225
Perry	4	641	2,618,173	2,618,814	10,239,563
Randolph	3	760,788	945,687	1,706,475	6,672,317
St. Clair	6	893,276	3,525,599	4,418,875	17,277,801
Saline	11	1,081,775	1,955,781	3,037,556	11,876,844
Sangamon	2	85,752	-	85,752	335,290
Schuyler	2	3,786	625,012	628,798	2,458,600
Stark	1	-	375,524	375,524	1,468,299
Vermilion	8	42,863	1,082,420	1,125,283	4,399,857
Wabash	1	-	1,894	1,894	7,406
Washington	2	26,663	-	26,663	104,252
Williamson	20	3,813,798	2,095,730	5,909,528	23,106,254
Total	128	22,205,581	22,926,945	45,132,526	$176,468,177

a Source: Production figures, Illinois State Department of Mines and Minerals.
b Average value for Illinois coal f.o.b. mine, estimated at $3.91 per ton, 1961.
c Includes 389,142 tons mined in Will County and 6,917 tons mined in Grundy County.

TABLE 5 - COAL PRODUCTION BY ILLINOIS COUNTIES, 1882-1961[a]

County	Total production (tons)	Total years active	Last year active
Adams	156,759	18	1961
Bond	7,355,569	57	1942
Brown	64,870	38	1961
Bureau	52,951,646	77	1961
Calhoun	96,247	27	1912
Cass	212,477	53	1941
Christian	243,759,819	77	1961
Clark	4,482	2	1955
Clinton	38,656,325	79	1960
Coles	198,932	6	1888
Crawford	45,400	16	1961
Douglas	4,320,125	16	1961
Edgar	915,698	41	1952
Effingham	796	1	1890
Franklin	498,466,835	63	1961
Fulton	210,356,758	80	1961
Gallatin	5,768,789	77	1961
Greene	672,739	78	1961
Grundy	40,879,347	78	1961
Hamilton	22,097	16	1905
Hancock	771,281	72	1958
Hardin	40	1	1890
Henry	22,628,381	80	1961
Jackson	90,485,090	80	1961
Jasper	23,739	11	1939
Jefferson	30,960,329	58	1961
Jersey	120,350	59	1951
Johnson	244,004	52	1956
Kankakee	8,730,513	42	1961
Knox	41,457,370	80	1961
LaSalle	65,547,638	79	1960
Livingston	10,111,437	80	1961
Logan	14,393,931	77	1961
Macon	11,000,468	65	1947
Macoupin	263,471,704	80	1961
McDonough	2,634,903	69	1951
McLean	5,544,139	47	1928
Madison	163,020,641	80	1961
Marion	39,224,766	80	1961
Marshall	12,516,141	70	1951
Menard	13,438,479	80	1961
Mercer	15,099,660	74	1961
Monroe	8,284	13	1941
Montgomery	95,130,793	80	1961
Morgan	190,787	64	1951
Moultrie	2,032,236	16	1924
Peoria	69,165,845	80	1961
Perry	182,469,398	80	1961
Pike	5,081	8	1942
Pope	1,562	11	1938
Putnam	10,071,893	29	1938
Randolph	80,237,727	80	1961
Richland	154	1	1890
Rock Island	3,846,169	67	1948
St. Clair	254,049,113	80	1961
Saline	206,154,244	80	1961
Sangamon	233,171,057	80	1961
Schuyler	5,451,844	79	1961
Scott	612,476	61	1942
Shelby	4,119,763	67	1950
Stark	1,772,889	71	1961
Tazewell	17,633,802	75	1956
Vermilion	157,464,805	80	1961
Wabash	191,464	33	1961
Warren	685,466	73	1954
Washington	17,950,566	80	1961
White	1,676,741	36	1940
Will	38,518,253	80	1961
Williamson	342,673,904	80	1961
Woodford	7,810,160	70	1951
Total (1882-1961). . . .	3,649,427,190		
Estimated production (1833-1881). . . .	73,386,123		
Total production (1833-1961). . . .	3,722,813,313		

a Source: Illinois State Department of Mines and Minerals.

TABLE 6 - NATIONAL PRODUCTION OF CRUDE OIL, 1958-1961[a]
(thousands of barrels)

State	1958	1959	1960*	1961[b]	Percent of 1961 total
Texas	940,166	971,978	927,479	938,017	35.8
Louisiana	313,891	362,666	400,832	424,962	16.2
California	313,672	308,946	305,352	300,062	11.4
Oklahoma	200,699	198,090	192,913	191,834	7.3
Wyoming	115,572	126,050	133,910	142,589	5.4
Kansas	119,942	119,543	113,453	112,241	4.3
New Mexico	98,515	105,692	107,380	112,083	4.3
Illinois	80,275	76,727	77,341	79,387	3.0
Mississippi	39,512	49,620	51,673	54,492	2.1
Colorado	48,736	46,440	47,469	46,746	1.8
Total	2,270,980	2,365,752	2,357,802	2,402,413	91.6
All other states	178,007	208,838	217,131	219,345	8.4
Grand total	2,448,987	2.574,590	2.574,933	2,621,758	100.0

* Revised figures
a Source: U. S. Bureau of Mines
b Preliminary figures.

TABLE 7 - ESTIMATES OF PROVED OIL RESERVES IN ILLINOIS AND OTHER STATES, 1959-1962[a]
(millions of barrels)

State[b]	1959	1960	1961	1962	Approximate change from 1961
Illinois	608	594	556	503	- 53
Indiana	71	74	66	62	- 4
Kansas	922	917	884	878	- 6
Kentucky	126	136	129	117	- 12
Louisiana	4,044	4,660	4,785	4,931	+ 146
New Mexico	894	1,026	1,084	1,090	+ 6
Oklahoma	1,898	1,865	1,791	1,788	- 3
Texas	14,322	14,860	14,759	14,850	+ 91
Wyoming	1,409	1,403	1,427	1,380	- 47
All other states	6,242	6,184	6,132	6,159	+ 27
United States	30,536	31,719	31,613	31,758	+ 145

a Source: American Petroleum Institute.
b Figures as of January 1, each year.

TABLE 8 - ESTIMATES OF NATURAL GAS RESERVES IN ILLINOIS AND OTHER STATES, 1959-1962[a]
(billions of cubic feet)

State[b]	1959	1960	1961*	1962	Approximate change from 1961
Illinois	170	175	173	164	- 9
Indiana	31	35	34	32	- 2
Kansas	20,234	19,981	19,620	19,190	- 430
Kentucky	1,215	1,159	1,144	1,127	- 17
Louisiana	55,112	59,854	63,386	66,029	+2,643
New Mexico	21,180	17,913	15,604	14,758	- 846
Oklahoma	15,207	16,651	17,312	17,351	+ 39
Texas	115,046	120,476	119,489	119,839	+ 350
Wyoming	3,650	3,847	3,935	4,127	+ 192
All other states	22,297	22,506	23,062	25,111	+2,049
United States	254,142	262,597	263,759	267,728	+3,969

* Revised figures.
a Source: American Gas Association.
b Figures as of January 1, each year.

TABLE 9 - ILLINOIS WELL COMPLETIONS AND PRODUCTION, 1936-1961

Year	Completions[a]	Producing wells		Production[b,c] (thousands of barrels)
		Number	Percent of completions	
1936	93	52	56.0	4,445
1937	449	292	65.0	7,426
1938	2,536	2,010	79.0	24,075
1939	3,617	2,970	82.0	94,912
1940	3,755	3,080	82.0	147,647
1941	3,807	2,925	77.0	134,138
1942	2,017	1,179	58.0	106,590
1943	1,791	1,090	61.0	82,256
1944	1,991	1,229	62.0	77,413
1945	1,763	1,094	62.0	75,210
1946	2,362	1,387	59.0	75,297
1947	2,046	1,102	54.0	66,459
1948	2,489	1,316	53.0	64,808
1949	2,741	1,447	53.0	64,501
1950	2,894	1,328	46.0	62,028
1951	2,383	947	40.0	60,244
1952	2,077	854	41.0	60,071
1953	2,161	1,161	54.0	59,025
1954	3,254	1,896	58.0	66,940
1955	3,885	2,164	56.0	81,131
1956	3,640	1,742	48.0	82,314
1957	2,585	1,114	43.0	76,649
1958	2,291	1,066	46.5	80,779
1959	2,032	1,034	51.0	76,727
1960	1,922	818*	42.6	77,341
1961	1,832	907	49.5	77,478

* Revised figure.
a Includes only oil and gas producers and dry holes.
b Based on information furnished by oil and pipeline companies.
c From U. S. Bureau of Mines through 1950.

TABLE 10 - ESTIMATED OIL PRODUCTION BY ILLINOIS COUNTIES, 1888-1961[a]

County	Total production[b] 1888-1961	1961 Production		1961 value[c] in thousands of dollars
		Thousands of barrels	Percent of state total	
Adams	90	37	0.05	$ 111
Bond	5,866	256	0.33	768
Brown	130	34	0.04	102
Christian	17,171	1,451	1.87	4,353
Clark-Cumberland	81,207	1,265	1.63	3,795
Clay	99,089	2,670	3.45	8,010
Clinton	69,905	1,686	2.18	5,058
Coles	16,205	454	0.59	1,362
Crawford	191,764	4,155	5.36	12,465
Douglas	2,541	220	0.28	660
Edgar	2,363	68	0.09	204
Edwards	34,456	1,232	1.59	3,696
Effingham	9,886	384	0.50	1,152
Fayette	281,923	13,908	17.95	41,724
Franklin	53,977	2,162	2.79	6,486
Gallatin	36,429	1,369	1.77	4,107
Hamilton	95,206	3,612	4.66	10,836
Hancock-McDonough	4,898	51	0.07	153
Jasper	37,060	721	0.93	2,163
Jefferson	62,783	2,373	3.06	7,119
Lawrence	307,532	7,743	10.00	23,229
Macon	522	23	0.03	69
Macoupin	177	10	0.01	30
Madison	14,538	319	0.41	957
Marion	329,177	9,878	12.75	29,634
Monroe	2	-	-	-
Montgomery	97	2	-	6
Moultrie	44	3	-	9
Perry	407	31	0.04	93
Randolph	2,731	214	0.28	642
Richland	75,827	2,489	3.21	7,467
St. Clair	2,883	6	0.01	18
Saline	12,568	566	0.73	1,698
Sangamon	450	141	0.18	423
Schuyler	1	-	-	-
Shelby	739	79	0.10	237
Wabash	77,883	2,677	3.46	8,031
Washington	19,941	621	0.80	1,863
Wayne	168,325	6,236	8.05	18,708
White	194,107	8,286	10.69	24,858
Williamson	258	46	0.06	138
Total	2,311,158	77,478	100.00	$232,434

a Subject to revision.
b In thousands of barrels.
c Average price estimated at approximately $3.00 per barrel.

TABLE 11 - ILLINOIS LIMESTONE AND DOLOMITE PRODUCTION, 1960-1961[a]

Stone use	1960		1961	
	Tons	Value	Tons	Value
Road and building	31,179,165	$42,187,629	26,959,600	$35,978,196
Agstone	3,111,654	4,389,253	3,413,576	5,029,972
Metallurgical and chemical	1,760,332	2,400,513	1,458,981	2,003,444
Railroad ballast	261,316	300,091	269,200	267,569
Other	719,550	1,700,872	1,475,527	2,556,757
Total	37,032,017	$50,978,358	33,576,884	$45,835,938

a Excluding stone used in manufacture of cement and lime.

TABLE 13 - ILLINOIS COMMON SAND PRODUCTION, 1960-1961[a]

Sand use	1960		1961	
	Tons	Value	Tons	Value
Road	6,634,190	$ 6,271,931	6,928,300	$ 6,505,495
Building	4,576,211	3,873,073	4,263,096	3,647,560
Other	778,385	488,050	986,641	623,108
Total	11,988,786	$10,633,054	12,178,037	$10,776,163

a Exclusive of silica sand and natural bonded molding sand.

TABLE 15 - ILLINOIS GRAVEL PRODUCTION, 1960-1961[a]

Gravel use	1960		1961	
	Tons	Value	Tons	Value
Road	10,230,894	$ 9,729,342	11,075,857	$ 9,832,635
Building	3,157,700	3,170,476	3,018,646	2,874,072
Railroad ballast	163,938	119,525	111,089	70,753
Other	1,062,621	675,246	1,444,162	1,200,219
Total	14,615,153	$13,694,589	15,649,754	$13,977,679

a Common gravel.

TABLE 12 - ILLINOIS STONE PRODUCTION BY REGIONS, 1961[a,b]

Producing counties and operations[c]	Stone use	Summary of crushed and broken stone production: Tons	Value	Average per ton
NORTHWEST				
Carroll, Henry, Jo Daviess, Lee, Mercer, Ogle, Rock Island, Stephenson, Whiteside, Winnebago	Road and building	3,337,545	$3,776,641	$1.13
Operations - 41	Agstone	267,845	349,005	1.30
	All other	88,113	64,791	0.74
	Total	3,693,503	$4,190,437	$1.13
WEST				
Adams, Brown, Hancock, Henderson, Knox, McDonough, Schuyler, Warren	Road and building	875,172	$1,068,413	$1.22
Operations - 23	Agstone	232,620	342,426	1.47
	All other[d]	898,594	1,313,246	1.46
	Total	2,006,386	$2,724,085	$1.36
WEST SOUTHWEST				
Bond, Calhoun, Christian, Greene, Jersey, Madison, Montgomery, Pike, Scott	Road and building	1,718,359	$2,629,181	$1.53
Operations - 26	Agstone	288,460	449,320	1.56
	All other[d]	-	-	-
	Total	2,006,819	$3,078,501	$1.53
SOUTHWEST				
Clinton, Jackson, Johnson, Monroe, Pulaski, Randolph, St. Clair, Union, Washington	Road and building	3,296,374	$5,155,434	$1.56
Operations - 21	Agstone	652,340	989,435	1.52
	All other	1,373,907	2,040,422	1.49
	Total	5,322,621	$8,185,291	$1.54

a Based on U. S. Bureau of Mines figures. All values at the quarry.
b Dimension stone and stone used for cement and lime not included.
c Refer to figure 8.
d All other stone from West Southwest Region combined with other stone in West Region.

TABLE 12 - continued[a,b]

Summary of crushed and broken stone production

Producing counties and operations[c]	Stone use	Tons	Value	Average per ton
		NORTHEAST		
Boone Cook DeKalb DuPage Kane Kendall LaSalle McHenry Will Operations - 25	Road and building	14,018,474	$18,254,612	$1.30
	Agstone	444,692	614,344	1.38
	All other	720,272	997,302	1.38
	Total	15,183,438	$19,866,258	$1.31
		EAST		
Kankakee Livingston Vermilion Operations - 9	Road and building	2,092,152	$ 2,665,171	$1.27
	Agstone	788,036	1,040,551	1.32
	All other	122,822	412,009	3.35
	Total	3,003,010	$ 4,117,731	$1.37
		CENTRAL		
Logan Menard Peoria Operations - 6	Road and building	639,040	$ 901,727	$1.41
	Agstone	353,819	593,734	1.68
	All other	-	-	-
	Total	992,859	$ 1,495,461	$1.51
		EAST SOUTHEAST		
Clark Clay Coles Cumberland Effingham Shelby Operations - 9	Road and building	572,172	$ 899,070	$1.57
	Agstone[d]	385,764	651,157	1.69
	All other	-	-	-
	Total	957,936	$ 1,550,227	$1.62
		SOUTHEAST		
Hardin Jefferson Massac Operations - 5	Road and building	410,312	$ 627,947	$1.53
	Agstone[d]	-	-	-
	All other	-	-	-
	Total	410,312	$ 627,947	$1.53
		STATE TOTALS		
Counties - 60 Operations - 165	Road and building	26,959,600	$35,978,196	$1.33
	Agstone	3,413,576	5,029,972	1.47
	All other	3,203,708	4,827,770	1.51
	Total	33,576,884	$45,835,938	$1.37

a Based on U. S. Bureau of Mines figures. All values at the quarry.
b Dimension stone and stone used for cement and lime not included.
c Refer to figure 8.
d Agstone from Southeast Region combined with agstone in East Southeast Region.

TABLE 14 - ILLINOIS COMMON SAND PRODUCTION BY REGIONS, 1961[a]

Producing counties and operations[b]	Summary of common sand production: Sand use	Tons	Value	Average per ton
NORTHWEST				
Bureau				
Carroll				
Henry				
Jo Daviess				
Lee	Paving	752,384	$ 614,787	$0.82
Ogle	Building	1,088,113	848,313	0.78
Rock Island	All other	228,998	123,996	0.54
Stephenson	Total	2,069,495	$1,587,096	$0.77
Whiteside				
Winnebago				
Operations - 26				
WEST				
Adams	Paving[c]	60,921	$ 46,444	$0.76
Fulton	Building	91,562	95,562	1.04
Schuyler	All other	-	-	-
Operations - 6	Total	152,483	$ 142,006	$0.93
WEST SOUTHWEST				
Bond	Paving	266,927	$ 217,460	$0.81
Calhoun	Building	477,784	460,814	0.96
Madison	All other	35,823	22,042	0.62
Pike	Total	780,534	$ 700,316	$0.90
Sangamon				
Scott				
Operations - 12				
SOUTHWEST				
Alexander				
Jackson	Paving	337,803	$ 299,016	$0.89
Pulaski	Building	254,658	231,726	0.91
Randolph	All other	43,551	38,105	0.87
St. Clair	Total	636,012	$ 568,847	$0.89
Union				
Operations - 6				
CENTRAL				
DeWitt				
Logan				
McLean				
Macon	Paving	508,269	$ 531,861	$1.05
Marshall	Building	659,908	729,107	1.10
Mason	All other	156,108	98,821	0.63
Peoria	Total	1,324,285	$1,359,789	$1.03
Tazewell				
Woodford				
Operations - 19				

a Based on U. S. Bureau of Mines figures. All values at the pit.
b Refer to figure 8.
c Small amount of other sand included with paving sand.

TABLE 14 - continued[a]

Producing counties and operations[b]	Summary of common sand production			
	Sand use	Tons	Value	Average per ton
NORTHEAST				
Boone				
Cook				
DeKalb				
DuPage				
Grundy	Paving	4,663,653	$ 4,533,360	$0.97
Kane	Building	1,427,681	1,031,693	0.72
Kendall	All other	347,633	250,931	0.72
Lake	Total	6,438,967	$ 5,815,984	$0.90
LaSalle				
McHenry				
Will				
Operations - 49				
EAST				
Champaign				
Ford				
Kankakee	Paving	91,989	$ 80,375	$0.87
Livingston	Building	131,246	135,345	1.03
Piatt	All other	140,830	66,249	0.47
Vermilion	Total	364,065	$ 281,969	$0.77
Operations - 12				
EAST SOUTHEAST				
Clark				
Coles	Paving	157,743	$ 109,563	$0.69
Crawford	Building	66,546	56,744	0.85
Cumberland	All other	6,280	3,255	0.52
Fayette	Total	230,569	$ 169,562	$0.74
Lawrence				
Shelby				
Operations - 16				
SOUTHEAST				
Edwards	Paving	88,611	$ 72,629	$0.82
Gallatin	Building	65,598	58,256	0.89
Wabash	All other	27,418	19,709	0.72
White	Total	181,627	$ 150,594	$0.83
Operations - 8				
STATE TOTALS				
Counties - 62	Paving	6,928,300	$ 6,505,495	$0.94
Operations - 154	Building	4,263,096	3,647,560	0.86
	All other	986,641	623,108	0.63
	Total	12,178,037	$10,776,163	$0.88

a Based on U. S. Bureau of Mines figures. All values at the pit.
b Refer to figure 8.

TABLE 16 - ILLINOIS GRAVEL PRODUCTION BY REGIONS, 1961[a]

Producing counties and operations[b]	Summary of common gravel production: Gravel use	Tons	Value	Average per ton
NORTHWEST				
Bureau				
Carroll				
Henry				
Jo Daviess	Paving	1,261,277	$1,129,347	$0.90
Lee	Building	673,141	700,729	1.04
Ogle	All other	54,615	45,203	0.83
Rock Island	Total	1,989,033	$1,875,279	$0.94
Stephenson				
Whiteside				
Winnebago				
Operations - 33				
WEST				
Adams	Paving	-	-	-
Fulton	Building	-	-	-
Knox	All other	-	-	-
Schuyler	Total[c]	339,358	$ 423,864	$1.25
Operations - 4				
WEST SOUTHWEST				
Bond				
Calhoun	Paving	128,543	$ 141,291	$1.10
Greene	Building	60,045	75,594	1.26
Pike	All other[d]	186,891	110,785	0.59
Sangamon	Total	375,479	$ 327,670	$0.87
Operations - 9				
SOUTHWEST				
Alexander	Paving	-	$ -	$ -
Pulaski	Building	-	-	-
Operations - 3	All other[d]	-	-	-
	Total	-	$ -	$ -
CENTRAL				
DeWitt				
Logan				
McLean				
Macon	Paving	2,419,822	$2,462,960	$1.02
Marshall	Building	259,308	340,306	1.31
Peoria	All other	145,746	154,535	1.06
Stark	Total	2,824,876	$2,957,801	$1.05
Tazewell				
Woodford				
Operations - 28				

a Based on U. S. Bureau of Mines figures. All values at the pit.
b Refer to figure 8.
c Total for region-fewer than three producers for each use.
d Small amounts of paving and building gravel from Southwest Region included with other gravel in West Southwest Region.

TABLE 16 - continued[a]

Producing counties and operations[b]	Summary of common gravel production: Gravel use	Tons	Value	Average per ton
	NORTHEAST			
Boone				
Cook				
DeKalb				
DuPage	Paving	6,048,340	$5,007,864	$0.83
Kane	Building	1,965,861	1,668,258	0.85
Kendall	All other	564,832	351,830	0.62
Lake	Total	8,579,033	$7,027,952	$0.82
LaSalle				
McHenry				
Will				
Operations - 67				
	EAST			
Champaign				
Ford	Paving	224,880	$ 207,466	$0.92
Kankakee	Building	43,381	70,739	1.63
Livingston	All other	42,813	33,027	0.77
Piatt	Total	311,074	$ 311,232	$1.00
Vermilion				
Operations - 16				
	EAST SOUTHEAST			
Clark				
Coles				
Crawford				
Cumberland	Paving	724,439	$ 619,413	$0.86
Fayette	Building	16,910	18,446	1.09
Lawrence	All other	143,750	69,260	0.48
Shelby	Total	885,099	$ 707,119	$0.80
Operations - 18				
	SOUTHEAST			
Edwards				
Gallatin	Paving	268,556	$ 264,294	$0.98
Wabash	Building	-	-	-
White	All other[c]	77,246	82,468	1.07
Operations - 8	Total	345,802	$ 346,762	$1.00
	STATE TOTALS			
Counties - 57	Paving	11,075,857	$ 9,832,635	$0.89
Operations - 186	Building	3,018,646	2,874,072	0.95
	All other	1,555,251	1,270,972	0.82
	Total	15,649,754	$13,977,679	$0.89

a Based on U. S. Bureau of Mines figures. All values at the pit.
b Refer to figure 8.
c Small amount of building gravel included with other gravel.

TABLE 17 - SPECIAL SANDS IN ILLINOIS, 1960-1961

Uses	1960 Tons	1960 Value	1961 Tons	1961 Value
Silica sand				
Glass sand	1,343,578	$3,305,897	1,338,447	$ 3,171,705
Molding sand	497,708	1,593,005	593,410	2,249,838
Other uses[a]	523,114	2,363,072	506,959	2,370,780
Ground silica[b]	200,864	2,476,096	235,093	2,653,349
Total silica sand	-	9,738,070	-	10,445,672
Natural bonded molding sand	38,893	80,040	41,812	65,611
Total special sands	-	$9,818,110	-	$10,511,283

a Grinding and polishing, blast, fire and furnace, engine, filter.
b For abrasives, ceramics, foundry, and filler from ground siliceous material.

TABLE 18 - PRODUCTION OF ILLINOIS CLAY PRODUCTS, 1960-1961

Clay products reported	1960 Amount	1960 Value	1961 Amount	1961 Value
Face brick	172,574,731	$ 6,944,093	179,346,477	$ 7,644,315
Common brick	222,404,910	6,178,088	170,701,503	4,137,146
Structural tile (tons)	26,784	296,224	33,001	395,806
Drain and sewer tile (tons)	157,421	4,720,295	148,749	4,551,012
Other structural products	-	3,208,500	-	3,827,412
Clay and silica refractories	-	11,284,009	-	10,474,476
Pottery and whiteware	-	23,989,856	-	25,370,322
Total		$56,621,065		$56,400,489

TABLE 19 - FLUORSPAR SHIPPED FROM MINES IN THE UNITED STATES AND IMPORTS IN 1961[a]

State	1961 Tons	1961 Value	Percent of United States Total tons	Percent of United States Total value
Illinois	116,908	$ 5,956,350	57.0	64.2
Kentucky	38,898	1,754,555	19.0	18.9
Montana	14,905	b	7.3	-
Nevada	18,129	356,610	8.8	3.9
Utah	610	17,608	0.3	0.2
Other states	15,633	1,189,496	7.6	12.8
Total 1961	205,083	$ 9,274,619	100.0	100.0
Total 1960	229,782	$10,390,165		
Imports for use in the United States				
Total 1961	505,759	$13,644,062		
Total 1960	534,019	$14,392,888		

a Source: U. S. Bureau of Mines.

b Montana fluorspar value included with other states.

TABLE 20 - FLUORSPAR (DOMESTIC AND FOREIGN) CONSUMED IN THE UNITED STATES, 1960-1961[a]

States	Tons consumed		Percent of 1961 total consumed
	1960	1961	
Delaware and New Jersey	101,117	122,198	17.9
Arkansas, Kansas, Louisiana, Mississippi, Oklahoma	81,322	89,859	13.2
Illinois	95,527	83,721	12.3
Pennsylvania	63,232	61,767	9.0
Ohio	66,280	49,516	7.3
West Virginia	37,275	47,614	7.0
California	14,086	43,030	6.3
Kentucky	33,691	39,330	5.8
Texas	31,561	38,358	5.6
Michigan	29,762	27,933	4.1
Other states	89,906	78,557	11.5
Total	643,759	681,883	100.0

a Source: U. S. Bureau of Mines.

Table 21 of this report was designed as a quick and convenient reference to the counties in Illinois producing any of the 13 major mineral products of this state. The table also indicates the number of different mineral products produced by any county in the state. Production of a commodity is indicated by an X.

TABLE 21 - SUMMARY OF MINERALS PRODUCED BY ILLINOIS COUNTIES, 1961

Counties	Cement	Clay products	Coal	Crude oil	Fluorspar	Lead	Lime	Natural bonded molding sand	Sand and gravel (common)	Silica sand	Stone	Tripoli	Zinc
Adams	-	-	X	X	-	-	X	-	X	-	X	-	-
Alexander	-	-	-	-	-	-	-	-	X	-	-	X	-
Bond	-	-	-	X	-	-	-	-	X	-	X	-	-
Boone	-	-	-	-	-	-	-	-	X	-	X	-	-
Brown	-	X	X	X	-	-	-	-	-	-	X	-	-
Bureau	-	X	X	-	-	-	-	X	X	-	-	-	-
Calhoun	-	-	-	-	-	-	-	-	X	-	X	-	-
Carroll	-	-	-	-	-	-	-	X	X	-	X	-	-
Cass	-	-	-	-	-	-	-	-	-	-	-	-	-
Champaign	-	-	-	-	-	-	-	-	X	-	-	-	-
Christian	-	-	X	X	-	-	-	-	-	-	X	-	-
Clark	-	-	-	X	-	-	-	-	X	-	X	-	-
Clay	-	-	-	X	-	-	-	-	-	-	X	-	-
Clinton	-	-	-	X	-	-	-	-	-	-	X	-	-
Coles	-	-	-	X	-	-	-	-	X	-	X	-	-
Cook	-	X	-	-	-	-	X	-	X	-	X	-	-
Crawford	-	X	X	X	-	-	-	-	X	-	-	-	-
Cumberland	-	-	-	X	-	-	-	-	X	-	X	-	-
DeKalb	-	-	-	-	-	-	-	-	X	-	X	-	-
DeWitt	-	-	-	-	-	-	-	-	X	-	-	-	-
Douglas	-	-	X	X	-	-	-	-	-	-	-	-	-
DuPage	-	-	-	-	-	-	-	-	X	-	X	-	-
Edgar	-	-	-	X	-	-	-	-	-	-	-	-	-
Edwards	-	X	-	X	-	-	-	-	X	-	-	-	-
Effingham	-	-	-	X	-	-	-	-	-	-	X	-	-
Fayette	-	X	-	X	-	-	-	X	X	-	-	-	-
Ford	-	-	-	-	-	-	-	-	X	-	-	-	-
Franklin	-	-	X	X	-	-	-	-	-	-	-	-	-
Fulton	-	-	X	-	-	-	-	-	X	-	-	-	-
Gallatin	-	-	X	X	-	-	-	-	X	-	-	-	-

TABLE 21 - continued

Counties	Cement	Clay products	Coal	Crude oil	Fluorspar	Lead	Lime	Natural bonded molding sand	Sand and gravel (common)	Silica sand	Stone	Tripoli	Zinc
Greene	-	X	X	-	-	-	-	-	X	-	X	-	-
Grundy	-	X	X	-	-	-	-	-	X	-	-	-	-
Hamilton	-	-	-	X	-	-	-	-	-	-	-	-	-
Hancock	-	-	-	X	-	-	-	-	-	-	X	-	-
Hardin	-	-	-	-	X	X	-	-	-	-	X	-	X
Henderson	-	-	-	-	-	-	-	-	-	-	X	-	-
Henry	-	-	X	-	-	-	-	-	X	-	X	-	-
Iroquois	-	-	-	-	-	-	-	-	-	-	-	-	-
Jackson	-	-	X	-	-	-	-	-	X	-	X	-	-
Jasper	-	-	-	X	-	-	-	-	-	-	-	-	-
Jefferson	-	-	X	X	-	-	-	-	-	-	X	-	-
Jersey	-	-	-	-	-	-	-	-	-	-	X	-	-
Jo Daviess	-	-	-	-	-	X	-	-	X	-	X	-	X
Johnson	-	-	-	-	-	-	-	-	-	-	X	-	-
Kane	-	X	-	-	-	-	-	-	X	-	X	-	-
Kankakee	-	X	X	-	-	-	-	-	X	-	X	-	-
Kendall	-	-	-	-	-	-	-	-	X	-	X	-	-
Knox	-	X	X	-	-	-	-	-	X	-	X	-	-
Lake	-	X	-	-	-	-	-	-	X	-	-	-	-
LaSalle	X	X	-	-	-	-	-	-	X	X	X	-	-
Lawrence	-	-	-	X	-	-	-	-	X	-	-	-	-
Lee	X	-	-	-	-	-	-	-	X	-	X	-	-
Livingston	-	X	X	-	-	-	-	-	X	-	X	-	-
Logan	-	X	X	-	-	-	-	-	X	-	X	-	-
McDonough	-	X	-	X	-	-	-	-	-	-	X	-	-
McHenry	-	X	-	-	-	-	-	-	X	-	X	-	-
McLean	-	-	-	-	-	-	-	-	X	-	-	-	-
Macon	-	-	-	X	-	-	-	-	X	-	-	-	-
Macoupin	-	-	X	X	-	-	-	-	-	-	-	-	-
Madison	-	X	X	X	-	-	-	-	X	-	X	-	-
Marion	-	-	X	X	-	-	-	-	-	-	-	-	-
Marshall	-	X	-	-	-	-	-	-	X	-	-	-	-
Mason	-	-	-	-	-	-	-	X	X	-	-	-	-
Massac	-	-	-	-	-	-	-	-	-	-	X	-	-
Menard	-	X	X	-	-	-	-	-	-	-	X	-	-
Mercer	-	X	X	-	-	-	-	-	-	-	X	-	-

TABLE 21 - continued

Counties	Cement	Clay products	Coal	Crude oil	Fluorspar	Lead	Lime	Natural bonded molding sand	Sand and gravel (common)	Silica sand	Stone	Tripoli	Zinc
Monroe	-	-	-	-	-	-	-	-	-	-	X	-	-
Montgomery	-	-	X	X	-	-	-	-	-	-	X	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-
Moultrie	-	-	-	X	-	-	-	-	-	-	-	-	-
Ogle	-	-	-	-	-	-	-	-	X	X	X	-	-
Peoria	-	-	X	-	-	-	-	-	X	-	X	-	-
Perry	-	-	X	X	-	-	-	-	-	-	-	-	-
Piatt	-	-	-	-	-	-	-	-	X	-	-	-	-
Pike	-	-	-	-	-	-	-	-	X	-	X	-	-
Pope	-	-	-	-	X	X	-	-	-	-	-	-	X
Pulaski	-	X	-	-	-	-	-	-	X	-	X	-	-
Putnam	-	-	-	-	-	-	-	-	-	-	-	-	-
Randolph	-	-	X	X	-	-	-	-	X	-	X	-	-
Richland	-	-	-	X	-	-	-	-	-	-	-	-	-
Rock Island	-	X	-	-	-	-	-	-	X	-	X	-	-
St. Clair	-	X	X	X	-	-	-	-	X	-	X	-	-
Saline	-	-	X	X	-	-	-	-	-	-	-	-	-
Sangamon	-	X	X	X	-	-	-	-	X	-	-	-	-
Schuyler	-	-	X	-	-	-	-	-	X	-	X	-	-
Scott	-	X	-	-	-	-	-	-	X	-	X	-	-
Shelby	-	-	-	X	-	-	-	-	X	-	X	-	-
Stark	-	-	X	-	-	-	-	-	X	-	-	-	-
Stephenson	-	-	-	-	-	-	-	-	X	-	X	-	-
Tazewell	-	X	-	-	-	-	-	-	X	-	-	-	-
Union	-	-	-	-	-	-	-	-	X	-	X	-	-
Vermilion	-	X	X	-	-	-	-	-	X	-	X	-	-
Wabash	-	-	X	X	-	-	-	-	X	-	-	-	-
Warren	-	X	-	-	-	-	-	-	-	-	X	-	-
Washington	-	-	X	X	-	-	-	-	-	-	X	-	-
Wayne	-	-	-	X	-	-	-	-	-	-	-	-	-
White	-	-	-	X	-	-	-	-	X	-	-	-	-
Whiteside	-	-	-	-	-	-	-	-	X	-	X	-	-
Will	-	X	X	-	-	-	-	-	X	-	X	-	-
Williamson	-	-	X	X	-	-	-	-	-	-	-	-	-
Winnebago	-	-	-	-	-	-	-	-	X	-	X	-	-
Woodford	-	-	-	-	-	-	-	-	X	-	-	-	-

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